

PROJECT PROCESS: Construction & Maintenance



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Case Study- I (before)



Case Study- I (during construction)

Sand placement



Rock placement



Contractor at work

Case Study- I (after construction)



Goose Fencing

Planting



Case Study- I (one year after completion)



MARYLAND DEPARTMENT OF NATURAL RESOURCES

Case Study- II (before)



Case Study- II (during construction)



Case Study- II (after construction)



Case Study- II (one year after completion)



Assessment Study

- Factors analyzed:
 - Marsh erosion
 - Structure condition
 - Non-planted vegetation

Marsh Erosion



No erosion



> 50% erosion

Structure Displacement



Excellent



Displacement

Non-Planted Vegetation



Excellent

Poor



Results

- Out of 177 projects, **131** of them were good or better.
- Maintenance- Crucial for the success of a project.

Probable Causes of Decreased Performance

- Poor engineering and/ construction.
- Poor execution of Plans.
- “Incorrect” planting.
- Choice of marsh grasses.
- Boat wake.
- Lack of maintenance.

Maintenance Protocol

- *Control the non-planted species.*
 - Use of moderate quantities of weed killers.
 - Choice of the weed killer: broad-spectrum vs. specific.



- *Keep the sky clear for the plants.*
 - Uprooting young shrubs.
 - Pruning.
- *Clearing junk!!!*
 - Debris or dead tree trunks.



Other Recommendations

- Restore any damage in the stone structures.
- Most of the maintenance methods are simple and yield great results.
- Survival of the marsh grasses is crucial for the success of the living shorelines projects.
- Marsh grasses need constant attention and care to protect homeowners' property from erosion.

Conclusion

- Choice of professionals- important
- Maintenance- Crucial for the success of a project.
- Process- arduous; but "doable".

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